

REMARKS

The above-captioned patent application has been carefully reviewed in light of the final Office Action to which this Amendment is responsive. Claims 20, 25 and 35 have been amended in an effort to clarify and particularly point out that which is regarded as the invention. To that end, it is believed no new matter has been added.

Claims 20-36 are pending. Claims 20, 21 and 24-36 have been rejected based on certain prior art (Muschelknautz et al. – U.S. Patent No. 3,759,578) under 35 USC §102(b). Claims 20, 25 have also been rejected based on 35 USC §112, second paragraph, for indefiniteness. In addition, the drawings have been objected to under 37 CFR §1.83(a). Reconsideration is respectfully requested herein based on the amended claims and the following discussion.

Applicants would like to gratefully acknowledge the apparent allowability of Claims 22, 23 over the prior art of record as there is no prior art rejection raised in regard therewith.

Turning first to the Section 102 rejection, Applicants herein respectfully traverse the rejection. In order to anticipate under the Statute, each and every claimed limitation must be found, or its equivalent, in the single cited reference. Those limitations that are not found in the reference must be notoriously well known to one of sufficient (e.g., ordinary) skill in the field of the invention.

The present invention is directed to the problem of pneumatically or hydraulically conveying forms of bulk material by means of a pipe conveyor wherein a reduction of energy is achieved by the conveying process.

As noted throughout the present specification, the structure according to the present invention results in a relatively smooth deflection of the conveying flow, such that fewer turbulences are generated. To accomplish same, Applicants utilize flow resistance disks within openings of an inner pipe, the inner pipe being eccentric and disposed within the conveying line to maximize the amount of conveying medium flowing back to the conveying pipe. The flow resistance disks according to the invention have an elliptical shape over at least a portion of their circumference

and are attached to the inner wall of the inner pipe by engagement of the elliptical disk circumference directly with the inner wall of the inner pipe. The cited art (Muschelknautz et al.), on the other hand includes a number of tongs that are out in the lower portion of the wall of the inner pipe and are deformed so that an outlet and an inlet opening is defined. Accordingly, no disks are provided or suggested. Moreover, the tongs are not of an elliptical shape with the edge or the circumference of the flow resistance disk being in substantial engagement with the inner wall of the inner pipe.

Claim 20 has been amended to more clearly point out this essential structural feature. Support is found in the present specification; see for example, page 3, lines 13-20 and Figs. 1, 2, 3, 4, 5 and 6 that each depict the disk 5 in circumferential engagement in the side sectioned views with the inner pipe 2. Recitation of the elliptic shape of the disk is replete in the specification – see page 5, lines 11-13, for example. Similar discussions of elliptical segmented disks are provided on page 6, lines 3-5. To that end, it is believed no new matter has been added. It is further believed the changes added herein should not require or necessitate a new search or create new issues.

Because Claim 20 is believed to be patentably distinct from the prior art, Claims 21 and 24-36 are also believed to be allowable since these claims depend therefrom. Reconsideration is respectfully requested. In passing, Claim 35 has been amended to specify that the disk can be “wholly” elliptical in shape to distinguish from Claims 20 and 36 (reciting a segment of an ellipse).

Turning to the Section 112 rejections, Applicants believe that Claim 20, as amended, cures the antecedent basis problem noted by the Examiner. Additionally, Claim 25 has been amended to remove the term “somewhat”. Reconsideration and withdrawal of this rejection is respectfully requested.

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Finally, and with regard to the drawing objections, Applicants believe that there is adequate support in the present specification to depict that a circumferential edge of the elliptical segment of the disk is in contact with the inner pipe of the inner wall. The elliptical disk is represented as reference numeral 5 and includes a circumferential edge thereof that is in contact with the upper portion of the inner pipe 2, as is clearly seen in each of the cross-sectional views of Figs. 1-6. Amended Claim 20, as drafted, provides additional clarification. Withdrawal of this objection and entry of this Amendment is respectfully requested.

In summary, it is believed the above-captioned patent application is now in an allowable condition and such allowance is earnestly solicited.

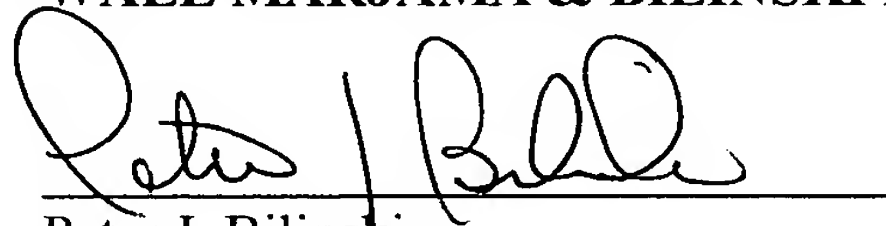
If the Examiner wishes to expedite disposition of the above-captioned patent application, he is invited to contact Applicant's representative at the telephone number below.

The Director is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,

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